GemBuilder™ for Smalltalk/VA Installation Guide

Version 5.4.4

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PATENTS

GemStone software is covered by U.S. Patent Number 6,256,637 “Transactional virtual machine architecture”, Patent Number 6,360,219 “Object queues with concurrent updating”, Patent Number 6,567,905 “Generational garbage collector with persistent object cache”, and Patent Number 6,681,226 “Selective pessimistic locking for a concurrently updateable database”. GemStone software may also be covered by one or more pending United States patent applications.

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Preface

About This Documentation

This Installation Guide explains how to install GemBuilder™ for Smalltalk/VA version 5.4.4.

For information regarding new features and changes in this release of GemBuilder for Smalltalk, please refer to the *GemBuilder for Smalltalk Release Notes* for version 5.4.4.

For questions or to submit feedback on this manual, join the documentation mailing list: http://lists.gemtalksystems.com/mailman/listinfo/documentation.

Terminology Conventions

The term "GemStone" is used to refer to the server products GemStone/S 64 Bit and GemStone/S, and the GemStone family of products; the GemStone Smalltalk programming language; and may also be used to refer to the company, now GemTalk Systems, previously GemStone Systems, Inc. and a division of VMware, Inc.

Technical Support

Support Website

gemtalksystems.com

GemTalk's website provides a variety of resources to help you use GemTalk products:

- **Documentation** for the current and for previous released versions of all GemTalk products, in PDF form.
- **Product download** for the current and selected recent versions of GemTalk software.

- **Bugnotes**, identifying performance issues or error conditions that you may encounter when using a GemTalk product.
- **TechTips**, providing information and instructions that are not in the documentation.
- **Compatibility matrices**, listing supported platforms for GemTalk product versions.

This material is updated regularly; we recommend checking this site on a regular basis.

Help Requests

You may need to contact Technical Support directly, if your questions are not answered in the documentation or by other material on the Technical Support site. Technical Support is available to customers with current support contracts.

Requests for technical assistance may be submitted online, by email, or by telephone. We recommend you use telephone contact only for more serious requests that require immediate evaluation, such as a production system down. The support website is the preferred way to contact Technical Support.

Website: techsupport.gemtalksystems.com

Email: techsupport@gemtalksystems.com

Telephone: (800) 243-4772 or (503) 766-4702

When submitting a request, please include the following information:

- Your name and company name.
- The version of GemBuilder for Smalltalk, client Smalltalk product and version, and versions of all related GemTalk products and other products.
- The operating system and version you are using.
- A description of the problem or request.
- Exact error message(s) received, if any, including log files if appropriate.

Technical Support is available from 8am to 5pm Pacific Time, Monday through Friday, excluding GemTalk holidays.

24x7 Emergency Technical Support

GemTalk offers, at an additional charge, 24x7 emergency technical support. This support entitles customers to contact us 24 hours a day, 7 days a week, 365 days a year, for issues impacting a production system. For more details, contact GemTalk Support Renewals.

Training and Consulting

GemTalk Professional Services provide consulting to help you succeed with GemStone products. Training for GemStone/S is available at your location, and training courses are offered periodically at our offices in Beaverton, Oregon. Contact GemTalk Professional Services for more details or to obtain consulting services.

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Chapter

1 Installation

This document describes how to install GemBuilder™ for Smalltalk (GBS) v5.4.4.

Please review the *GemBuilder for Smalltalk Release Notes* for v5.4.4 for details of the changes, before upgrading to this version.

This version of GemBuilder for Smalltalk is compatible only with GemStone/S 64 Bit 3.x. Support for 32-bit GemStone/S, and for earlier versions of GemStone/S 64 Bit, is provided in separate releases.

Version 5.4.4 of GemBuilder for Smalltalk supports VA Smalltalk only.

Installing GBS is a multi-step process:

1. Verify System Requirements (page 8)
2. Install GBS v5.4.4 distribution (page 8)
3. Load GBS Smalltalk code into your development environment (page 9)
4. Install client shared libraries from GemStone/S 64 Bit Server (page 10)
5. Configure GBS to load client shared library (page 11)
6. Verify installation by logging into the GemStone/S 64-Bit Server (page 12)

GBS does not support upgrade from an image in which an older version of GBS has been previously installed. To upgrade GBS, start with a VA Smalltalk image in which GBS is not installed. Follow the instructions in this *Installation Guide*, and then load your application code.

1. Verify System Requirements

Prior to installing, verify that your system meets the requirements for v5.4.4.

Supported Operating System, Client Smalltalk, and Platforms and GemStone Server Versions

The following table describe the client Smalltalk versions and platforms supported by GBS 5.4.4, and the GemStone/S 64 Bit server versions that can be used with each.

	VA Smalltalk 8.6.3
Windows 10	3.4, 3.3.6
Windows 8, Professional or above	3.4, 3.3.6
Windows Server 2008 R2	3.4, 3.3.6
Windows 7, Professional or above	3.4, 3.3.6

GemStone Server Shared Library Files

GemBuilder for Smalltalk requires access to a set of shared client library files that are compatible with the specific GemStone/S server product and version.

The required libraries must be for the platform on which GBS will be running, regardless of the platform on which the server is running. With 32-bit VA Smalltalk, you must use 32-bit shared libraries.

2. Install GBS v5.4.4 distribution

GemBuilder for Smalltalk is provided in zipped form. You will need to unzip the distribution into a temporary location or into the installation directory you have selected.

The GemBuilder for Smalltalk distribution includes the following:

gbs5.4.4.dat — The GemBuilder for Smalltalk ENVY data file.

A directory named **docs** that contains PDF copies of the GemBuilder for Smalltalk documentation:

GBS-UsersGuide-VA-5.4.pdf (unchanged from previous release)
GBS-ReleaseNotes-5.4.4.pdf
GBS-InstallGuide-5.4.4.pdf

3. Load GBS Smalltalk code into your development environment

Loading GemBuilder is a two-step process:

- Import the GemBuilder for Smalltalk configuration map into your ENVY repository.
- Load GemBuilder for Smalltalk from your ENVY repository into your image.

Importing into your ENVY Repository

You need to perform this procedure only once per ENVY repository. You can then load GBS from that repository into any number of Smalltalk client images.

1. Start a client Smalltalk image.
2. In the Configuration Maps Browser, choose **Names > Import > Selected Versions...**.
3. A dialog will open requesting **Enter the IP address or host name of the server**. Leave the field blank and click on **OK**.
4. In the resulting dialog, navigate to the GBS distribution location and select the file `gbs5.4.4.dat`.
5. Click **Open**.
6. In the Name pane on the left, select the `GBSGemBuilder` configuration map to import.
7. In the middle versions pane, select version `5.4.4`, and click **>>** to move it to the Selected versions pane on the right.
8. Click **OK** or **Accept**.
9. Check in the Configuration Maps Browser to ensure that the configuration map was imported.

Loading into an Image

1. Start a client Smalltalk image which does not have any previous versions of GemBuilder for Smalltalk loaded.
2. From a Configuration Maps Browser, select the newly imported `GBSGemBuilder` map in the Names pane on the left. Version `5.4.4` appears in the middle Editions and Versions pane.
3. In the Editions and Versions pane, select `5.4.4` and choose the menu item **Load** to load the configuration map.
4. Save your image. You may find it helpful to create an additional copy of this GBS image to use as a backup during application development.

4. Install client shared libraries from GemStone/S 64 Bit Server

GBS requires a set of client-specific shared libraries (.dlls) that are provided as part of the GemStone server product distribution. These libraries need to be loaded into the VA Smalltalk image in which GBS is installed, in order for GBS to be able to login to the GemStone server.

These client libraries should be the same release version as the GemStone/S 64 Bit server.

You may need or wish to install the entire GemStone/S 64 Bit Windows Client on the client node, or just copy the specific shared libraries that are required.

Complete GemStone/S 64 Bit Windows Client Installation

See the GemStone/S 64 Bit Windows Client Installation Guide for instructions on how to install the GemStone/S 64 Bit Windows Client.

In most cases, you will want to define the %GEMSTONE% environment variable to point to the GemStone installation directory, and add %GEMSTONE%\bin to your machine search path.

Shared Libraries only

If you do not need tools such as topaz, gslist, and VSD on the client machine, then you may copy only the shared client libraries to your client node. You will need to download the GemStone/S 64 Bit Windows Client, locate the required files, and copy them.

The required libraries files are listed in Table 1.

Note that the server installation includes two directories containing the shared libraries; bin, containing 64 bit libraries and executables, and bin32, containing 64 bit libraries and executables. Ensure you copy the client library files from the bin32 directory (GBS supports only 32-bit VA Smalltalk).

You may copy these shared libraries to:

- the VA Smalltalk working directory, or the directory containing the executables for your VA Smalltalk installation (either the installation directory, or the `bin` subdirectory, depending on your version).
- to a directory location on your machine search path, or that you add to the machine search path
- To a directory that is not on your machine search path.

your choice of destinations on the client will affect your options in specifying the client library, that is, whether you must include the full path and filename or only the name of the file.

The following tables list the specific client libraries that you must copy from the server installation to the client node.

Table 1 Shared Libraries to copy GemStone/S 64 Bit Server Distribution

Server Product and Version	Windows Client Shared Libraries	Argument to libraryName:

GemStone/S 64 Bit v3.4	In `%GEMSTONE%\bin32:`
	`libgcirpc-3.4.0-32.dll`
	`libssl-3.4.0-32.dll`
	`msvcr100.dll`
		`libgcirpc-3.4.0-32.dll`

GemStone/S 64 Bit v3.3.6	In `%GEMSTONE%\bin32:`
	`libgcirpc-3.3.6-32.dll`
	`libssl-3.3.6-32.dll`
	`msvcr100.dll`
		`libgcirpc-3.3.6-32.dll`

5. Configure GBS to load client shared library

GBS uses the configuration parameter `libraryName` to determine the name and location of the shared library to load. Only one library name is set by this parameter, although all the listed library files must be available, usually in the same location, in order for the library load to succeed and logins to work. The library name to specify is listed in Table 1

There are a number of options for specifying the library file that should be loaded:

- **Execute code to set full path**

  Set `libraryName` to the full path and file name of the client library file. For example:

  ```
  GbsConfiguration current libraryName: 'InstallDir\GemStone64Bi
     tClient3.4.0-x86.Windows_NT\bin32\libgcirpc-3.4.0-32.dll'
  ```

  With this option, the shared libraries may be anywhere on the client; the libraries do not need to be on the %PATH%.

- **Execute code to set filename, allow system to determine path**

  Set `libraryName` to the file name of the client library file, without the path. For example:

  ```
  GbsConfiguration current libraryName:
     'libgcirpc-3.4.0-32.dll'
  ```

  This options requires that the library be in a directory on the %PATH%, in the current working directory, or in the VA Smalltalk executable directory.

- **Use file dialog to set path and filename**

  If the library name specified by `libraryName` in the previous options cannot be loaded, the resulting notification provides the option of selecting a file using a file dialog.

The load error may be due to an incorrect `libraryName`, copying the wrong library, or an additional required library failing to load.

Navigate to the location of the shared library and select the file. The dialog provides filename filtering, so only valid library names will appear.

Selecting a file using the file dialog will set `libraryName` to the full path selected.

6. Verify installation by logging into the GemStone/S 64-Bit Server

To preserve your `libraryName` setting, save your image. You may wish to make a backup of this image.

The `libraryName` setting controls the shared library that is loaded the first time GemStone server code is accessed after image startup. If you have a client library already loaded in your image, changing the `libraryName` has no effect. To change the shared library that is loaded, update the `libraryName`, and save and restart the image.

Once the shared libraries are loaded, you should test your installation by logging into the GemStone/S 64 Bit server. You will need to ensure that the Stone repository monitor and a NetLDI are accessible.

See the *GemBuilder for Smalltalk User's Guide*, Chapter 11, for instructions on logging into the GemStone/S 64 Bit server.